

Sidebands

The Newsletter of the **EAST GREENBUSH AMATEUR RADIO ASSOCIATION**



February 2017

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Secretary - Russ Greenman, WB2LXC

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HF Amplifiers versus Antennas—One Ham's Opinion

By Kirk A. Kleinschmidt, NT0Z

Think you need a shiny new linear amplifier to chase away your HF radio blues? Think again. What you probably need is a better antenna! Here's why...

Let's start by eliminating any thoughts of fairness and equality regarding this article's handling of the age-old philosophical struggle between amplifiers and antennas. More than a few hams will take exception to my biased statements (common when trampling sacred cows and sneering at tradition), but if you're a typical beginning ham, you're probably wondering whether to buy an amplifier or improve your antenna system—or maybe both. It's a logical question.

You want to improve your station's signal quality, make more QSOs, work more DX stations, rack up higher contest scores and chat with others while enjoying armchair copy. You want to know whether amplifiers are a good investment, whether they'll require additional equipment and services, whether they'll provide the boost in readability you've been desiring and so on. By now you're thinking that I'm an "antenna guy," and that I'm here—through this article—to persuade you to improve your antenna system. You're right!

But beyond the many nuts and bolts reasons detailed herein, I'd like you to at least consider a few philosophical reasons to keep your power output at barefoot levels (or less!). Then, if you're not convinced, we'll take a look at the cold, hard facts about amplifiers and antennas.

Amateur Radio's Middle Path

Amateur Radio operation in the US is constituted as a radio service, with rules, regulations and goals that go beyond the interest of mere hobby operation. In becoming licensed hams, we agreed to play by those rules. One of the most important rules compels us to use the minimum transmitter power required to communicate. That doesn't rule out the use of linear amplifiers, of course, but it does put a damper on their indiscriminate or habitual use.

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Get Your License... Win a Radio!

EGARA's latest license exam session on January 7th offered a bonus to one lucky new ham... a free dual-band Alinco mobile radio! The giveaway was made possible by the family of Silent Key Howard P. Caudle, W2RSU, which donated his gear to EGARAs to honor his memory and to promote amateur radio.

The winner, Oliver Holmes of Delmar, was selected at random from among the five new Techs who earned their license during the VE session. Overall, eight applicants passed their tests, resulting in four new Techs and four new General Class operators. Roderic Martin of Saugerties passed both his Tech and General during the test session.

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Save the Date! Next EGARAs Monthly Meeting is February 8th! - Program: FCC Licensing History

Pass Your Test - Win a Radio!

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"I never expected to get both my license and a \$300 mobile radio!" said Holmes.

"My Dad was a ham operator, W2WKD, when I was a kid back in the 60's in Utica, said Holmes. "I was working on the code and studying but we got side tracked when we moved."

"My son and I had both been talking about taking the exam and now that he is in Virginia we had an incentive to get started," he said. "I called him after I passed the exam and let him know I passed, as well as winning the radio. He was amazed about the radio and immediately looked it up to see



EGARA President Tom Scorsone presents newly licensed Technician Oliver Holmes with his brand new Alinco dual band VHF/UHF radio.

what the features were. I am involved with the Lower Adirondack Search and Rescue, and being radio-capable will be an asset."

The Caudle family had left it to the discretion of Egara as to how best to further amateur radio through its donation.

After consulting with other members of the club's board, President Tom Scorsone moved ahead with the idea of presenting a newly licensed ham with a radio that would allow them to get on the air quickly.

"I think it was a great success and we will do it again at a future exam session," Scorsone said.

Four club members served as VEs at the session: Tom Scorsone, KC2FCP, Steve VanSickle, WB2HPR, Dave Williams, N2VLQ, and Bryan Jackson, W2RBJ.



VE Examiner Dave Williams, N2VLQ, prepares applicants for their tests. All eight earned licenses during the session which was held on January 7th.

KJI Slated to Return to Egara's Hamfest May 13th

KJI Electronics will once again be at Egara's Annual Hamfest on May 13th offering a wide selection of amateur radio gear and accessories.

The New Jersey-based company is an authorized dealer for such leading brands as Icom, Yaesu, Kenwood and MFJ. Once again, the event will be held at the East Greenbush Fire House, where facilities include a covered pavilion that protects vendors and attendees from inclement weather.

"The Egara Hamfest is one of our favorites," said KJI owner Genen Niemiec. "We look forward to having a nice selection of equipment on hand, including the latest offerings in amateur radios, antennas and accessories."



KJI offered a wide range of gear and accessories at Hamfest 2016.



Last year's Hamfest enjoyed an excellent turnout, with a variety of new and used gear being offered for sale.

Hams from at least five states attended, including New York, Vermont, Connecticut, Massachusetts and New Jersey.

"We hope to make our Hamfest even bigger this year," said Egara Vice President Ridge Macdonald, KB2HWL. "In addition to raffles and giveaways, we're looking to making our food selections better than ever. After all, great food makes for a great Hamfest!"

As in past years, vendor tables will be available on a first come, first serve basis. Anyone interested in reserving space in advance is asked to contact Tom Scorsone at kc2fcp@nycap.rr.com.

Meanwhile, on March 11, a ham SwapFest will be hosted by the Saratoga County Amateur Radio Assn. The event is held at the Cooperative Extension Building (aka Solar Bldg), 50

West High Street (Rt 67w) in Ballston Spa. Doors open at 8 am and admission is free. There will also be a VE test session at 12pm. For info, contact Jim, KG2H, (kg2h@arrl.net).



Amplifier or Antenna? (continued from page 1)

Powering your amplifier through your shack's light switch certainly violates the rule, as does running maximum legal output power when chatting with the gang across town (or when propagation clearly doesn't require it).

The minimum necessary power rule is designed to protect us all. It promotes responsible, considerate operation. Try it sometime! Reduce your 100-W signal to 50 or 25 W. Thanks to years of low-power operating, I know that you'll maintain effective communication most of the time. You'll also improve your operating skills, enjoy a greater sense of achievement and gain an intuitive sense of propagation.

By the way, the FCC's minimum necessary power rule isn't suspended for contest operation, to work DXpeditions, etc. About the only open-and-shut case for the automatic use of maximum available power is for emergency communications. When someone's life is on the line, the more power the better. That kind of service is what the Amateur Radio Service is all about.

Skill Versus Brute Force

Long before David and Goliath had their epic battle, skill has been tangling with brute force. I'm sure you have your favorite analogy. Basically, it comes down to the fact that any idiot can fire up a water-cooled Voice of America-size transmitter and blurt out a whopping signal. I place hams who take this approach in the same category as the guys who screech the tires on their 1-ton pickups or water their lawns during drought emergencies. Both are equally impressive, I'm sure.

On the other hand, if you align yourself with the Davids of the world, substituting skill and persistence for brute force, you'll be in better company—and you'll be upholding the tenets of the Amateur Radio Service.

The Golden Rule

Hams treading the Middle Path are concerned about others—hams, neighbors, family members, etc. They try to fit in, to get along, to accommodate a community of interests in addition to their own. They practice the Golden Rule of “do unto others as you would have them do unto you” (reasonable variations notwithstanding).

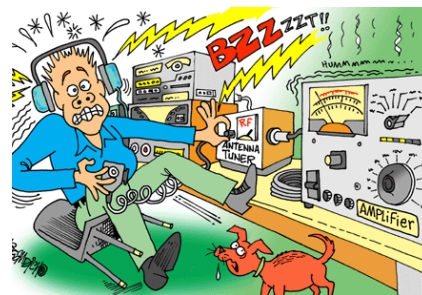
As hams who comprise a federally licensed emergency service, we enjoy certain protections from unreasonable local restrictions. These privileges are welcome and necessary as a whole, but they can be easily abused. Just because we can transmit a 1500 watt signal doesn't mean we should. Just because we can erect a 200 foot-high antenna tower doesn't mean we should.

Hams who follow the Golden Rule integrate their radio pursuits with the pursuits of others—not because they have to, but because they want to!

Governments can't legislate common sense. That's up to us. Okay, that's the end of my emotional pitch for restraint. If you're still tempted to reach for the power switch (the high power switch) or dig into your rainy day fund to purchase an amplifier, let's look at the facts.

The Ham Next Door

To start, let's assume that you have a typical shack. A 100 watt transceiver graces your operating desk and “talks” to a coax-fed dipole (or two) through a 300 watt antenna tuner. Thanks to the tuner, your rig can happily put out full power regardless of actual antenna/feed line SWRs on the various bands you work.



You use the same setup as your “Elmer” and most of the guys in the local radio club. Uncounted thousands of hams have used similar setups over the years, so they must work pretty well, right? Maybe. But maybe not.

In fact, you might have noticed that working stations on some bands doesn't seem as easy as it should—especially DX stations. You might even be dreaming of solving your problem by cranking up the power. By adding a gleaming, glowing monster amp to your modest shack, you might think, those stations with once marginal copy will respond with ease.

It's a comforting image, but it's probably more fantasy than reality. Although you may not yet know it, you'll likely get a lot more signal for a lot less money if you upgrade your antenna system before shelling out the bucks for an amplifier.

The Price of Power

Let's boost our signal a step or two at a time and see how the decibels stack up against the greenbacks. If your amplifier budget is modest, a small solid-state or single-tube amplifier will boost your 100 watt barefoot signal to about 500 watts. That's enough to be noticed, or so you think—but just how noticeable?

Here's the law every amplifier has to measure up to -- every time you double your power output, stations that are receiving your signal hear a 3-dB increase in strength. That's half an S unit! To twitch the needle a full S unit you need to quadruple your power output (a 6-dB increase)!

(continued on page 5)

EGARA January Meeting Minutes

The monthly membership meeting of the club was held on Wednesday, January 11th at the Masonic Temple.

- Egara President Tom Scorsone, KC2FCP, called the meeting to order at 7:15 pm;
- Treasure Bryan Jackson, W2RBJ, reported on the club's finances and announced that the club's bank account had been moved to SEFCU because it offered the club a free business account. The previous bank imposed monthly fees;
- It was announced that annual club dues are now being assessed; Six members paid their dues at the meeting. Two members paid for 2017 at the November meeting. Dues for 2017 remain at \$15 for an individual and \$25 for a family;
- President Scorsone provided an update on the club's FCC exam session that was held on Saturday, January 7th at the East Greenbush Community Library. Eight applicants took their exams, resulting in four new Technician and four general licenses being earned. In addition, a drawing was held among the successful Technician licensees, with the winner being awarded a new dual band radio (see story beginning on page one of this issue for more information);
- Vice President Ridge Macdonald, KB2HWL, announced the programs that have been scheduled for upcoming meetings: February will feature a presentation by Gerald Murray, WA2IWW, on the history of amateur radio licensing. In March, the meeting will focus on antenna tuning and matching networks, April's meeting will include election of officers and a review of preparations for the club's annual Hamfest on May 13th, and June will include preparations for the annual Field Day event;
- The program for the January meeting featured building portable ground plane antennas for the 2 meter and 70 cm bands, using readily available materials. Using such antennas overcomes the 6 to 7 db loss experienced by "rubber ducky" antenna used on most HT radios (see story in this issue); The program was led by Steve VanSickle, WB2HPR.
- Refreshments were provided for those in attendance, including pizza, cookies, coffee, soda and water;
- The meeting adjourned at 8:15 pm.

Silent Key: Les Johnson, AC2OX

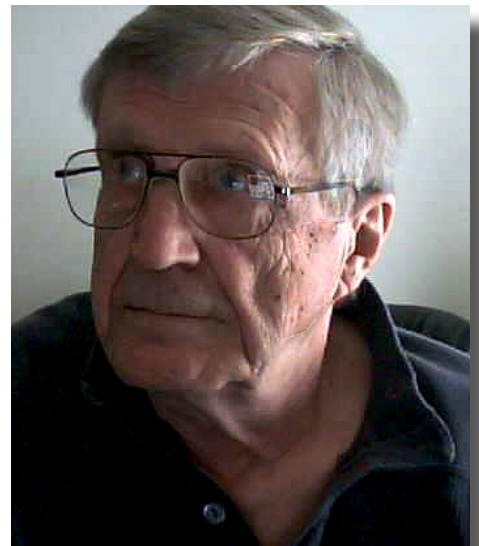
EGARA member Les Johnson, AC2OX, passed away peacefully in his sleep on December 23rd at his home in Selkirk. According to his wishes, there was no funeral service and his ashes were spread in his garden.

After a hiatus of 35 years, Les returned to amateur radio in 2014 at the age of 76. He passed the required exams and became re-licensed as an Amateur Extra with a new call sign.

Les equipped his shack with a brand new Kenwood TS-2000 and an 80 meter windom OCF antenna. He also installed a dual band 2 meter/70 cm vertical for hitting local repeaters.

Despite his late return as a ham, he was active on the lower HF bands and was working toward an SKCC Tx4 Award.

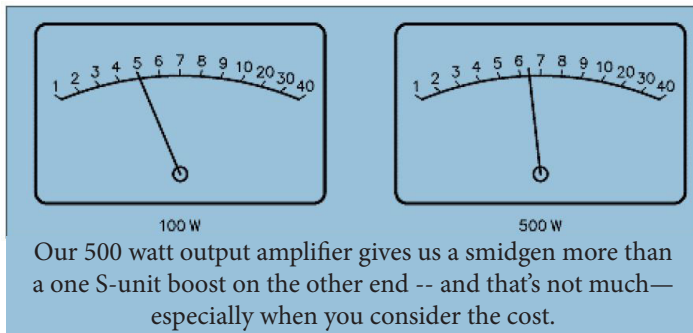
"Les was a beloved member of our club and liked by everyone," said Egara President Tom Scorsone. "He will be greatly missed by all who knew him."



Amplifier or Antenna? (continued from page 1)

The power output progression looks like this:

- 100 watts doubled to 200 watts equals a 3-dB increase
- 200 watts doubled to 400 watts equals a 6-dB increase.
- 400 watts doubled to 800 W equals a 9-dB increase (exceeding the output power of our entry-level amp).
- 1000 watts provides a 10-dB increase in power output.



Let's assume that we have an average conversation in progress on a quiet band. Your current 100 watt signal pushes the meter on the receiving end to S5. Increase your output to 500 watts and the other guy's meter might slide up to a tad more than S6—a change he likely won't even notice. Turn on the 1000 watt afterburner and you'll make his meter twitch almost to S7. Oh boy! Yes, he'll probably notice a difference now, but he heard you well enough at S5, didn't he?

More Power

So, you want to run even more power? Using our calculations from before, boosting your signal to a kilowatt output provides a 10-dB shot in the arm. That's just under two S units on the other end—S3 to S5, S7 to S9, etc. That's enough of a difference to be noticed, but still not enough to “burn down the barn.” And by the way, the most affordable kilowatt amplifiers cost about \$1500. If you really go for the gusto and buy a legal-limit amplifier, your 1500 watt signal will be about 12 dB stronger than your “barefoot” transceiver. Because of the “price of power,” 1500 watt is still only two S units stronger! And a legal-limit amplifier is hardly a casual purchase. It'll set your wallet back about \$2500.

Hidden Costs

Don't think you can get away with just an amplifier! The power output curve is often deceptive. For example, above 300 watt output or so, you'll need a beefier antenna tuner. Expect to spend up to \$500 for a good one, perhaps more.

And don't forget about the ac mains, either. You can probably get away with running a 500 watt output amplifier on 120 V ac, but beyond that, it's 240 V all the way. (Don't believe

me? A 500 watt output amplifier runs about 1000 watts input power. That's 8.5 amps at 120 volts. With your rig added in, that's more than 10 amps. Believe me, the lights in your house will “jump” to the rhythm of your code key or your spoken words!

Chances are good that you won't know how (or won't want to know how) to install that 240 volt line yourself, either. The materials and an electrician to install them likely will total \$300 to \$500. Many first-time amplifier users don't consider their beast's power supply requirements until they've set up the amp and started “browning out” the rest of their house! If this is you, you'll be lucky if you don't trash your TV set or your home computer in the process of “modulating” your 120 volt power feed!

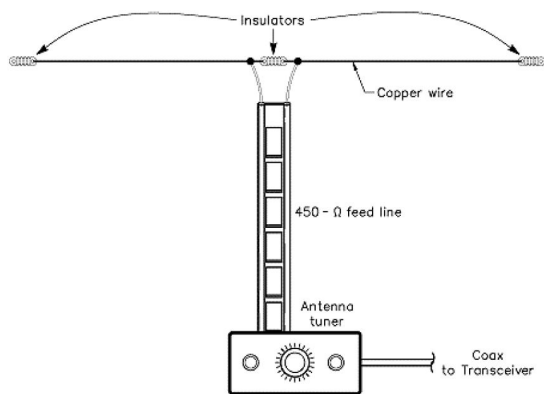
If you live in an urban setting, don't neglect the potential “public relations” costs of firing up a killer signal in the midst of all those consumer electronics devices. I know - you can legally stand on the solid rock of FCC-mandated power output limits - but be warned that it can be a lonely vigil.

A Better Way?

To save wear and tear on your neighbors, fellow hams, your wallet and even your house wiring, consider improving your antenna system before investing in an amplifier. Here are some ideas to get you started:

- One almost universal way to get out more signal is to get your antenna(s) farther up in the air (your present antenna or a new one). Build a taller mast, find a taller tree or put up a tower.
- If that dipole just isn't cutting it, put up a contest-winning and DX-catching secret weapon a full-wave horizontal loop for 40 or 80 meters (up as high as possible, of course!). Feed it with coax and use a tuner on bands above the fundamental frequency. That's a “cheap ‘n’ dirty” way to snag an extra 2 to 10 dB, depending on frequency.
- Disconnect the feed line from your coax-fed dipole, the one you try to use on several bands, and replace it with 450 ohm ladder line. With a coax feed, even though your antenna tuner may be presenting a happy impedance to your transmitter, feed line losses due to high SWR may slash your signal by 6, 10 or 25 dB, depending on the band and the size of your dipole! By using 450 ohm open-wire line you'll likely reclaim most of that lost power. Now that's a shot in the arm that anyone can afford! See the diagram on the next page for a sample setup.





This is one of the easiest, inexpensive antennas for the HF beginner. Just string up a dipole made of two equal lengths of copper wire. Don't worry about the overall length -- just make it as long as you can. Connect the feed line to the center insulator and run it back to an antenna tuner with a balanced output. Attach coax between the tuner and the radio and you're in business on several bands!

- For less than the price of an entry-level amplifier you can buy a multi-band beam antenna and a decent rotator. This dynamic duo, mounted reasonably high, will offer a 5 to 7-dB steerable improvement to your signal. Remember: Amplifiers only boost your transmitted signal and do nothing to improve reception! By rotating a directional antenna you can often achieve the double-advantage of boosting the signal you're trying to receive while attenuating signals that are unwanted.
- On SSB, learn the correct use of your rig's speech processor. There's another 3-dB (or more) improvement, this time in the modulation department! No purchase necessary!

Aftermath

So, after looking at the cold, hard facts, do antennas win out over amplifiers at your shack? Or will your operating table soon be sporting some heavy iron? As always, the choice is yours.

Amplifiers do have their uses - especially after you've tweaked your antenna farm. Add a 10-dB amplifier to a 7-dB beam antenna and you've got a whopping 17-dB improvement in signal strength! That will put you on the map—especially when the minimum necessary power required to communicate calls for maximum smoke. And when conditions are poor an amp may make all the difference between being heard and lost in the noise.

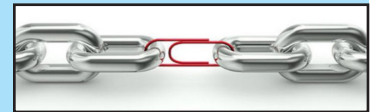
But, given the choice, I'll take a "killer" antenna over an expensive, power-hungry amp any day. How about you?

Need an Antenna? Build Your Own

January EGARA Meeting Shows How to DIY

Ask just about any Elmer what's the most important part of an amateur radio set up and you'll probably be told just one thing: *The Antenna!*

After all, you can be running a kilowatt, but if your rig can't find a way to effectively radiate



that power, then you're not going to be heard very well. Meanwhile, chances are good that your transmitter, tuner and other associated equipment are being stressed by RF that can't find its way into space. Unfortunately, for too many hams, the antenna is the weak link in their system.

Luckily, finding a solution doesn't have to be hard. Doing a little research will lead you to a multitude of antenna designs that can be tailored for your situation. Best of all, there's almost always a solution that you can build yourself with a little work and with hardware that's both inexpensive and easily obtained.

With that in mind, EGARA's January meeting set out to demonstrate how to build antennas for the 2 meter and 70 cm bands using readily available parts. The idea for this project is to overcome the limitations imposed by the "rubber ducky" antennas that come with most hand-held radios. These can impose losses as much as 6 to 7 dB -- which means that a radio rated to output four watts may only be radiating one watt.

To build a more efficient antenna we need elements that are cut for the band we want to operate on so they resonate properly. For 2 meters, the elements each need to be 19 inches long. For the 70 cm band, we'll cut each element to a length of 6 inches.

Next, we'll cut five pieces of 14 ga solid copper wire to the appropriate length for the antenna we're building -- one for the vertical radiator and four for the ground plane radials.

Solder one piece -- the vertical radiator -- directly to the center of a SO-239 female coax connector. Attach the four radials to the mounting holes on the connector using bolts and nuts to secure them. It is easiest to first solder each radial to a ring terminal and then bolt the ring to the mounting hole. Once mounted, bend the radials downward at a 45 degree angle.

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On the Beam

News & Notes

FCC Dismisses Petitions from Radio Amateurs to Upgrade License Holders

The FCC has turned down two petitions filed last year, each seeking similar changes in the Part 97 Amateur Service rules. James Edwin Whedbee, N0ECN, of Gladstone, Missouri, had asked to amend the rules to reduce the number of Amateur Radio operator classes to Technician, General, and Amateur Extra by merging remaining Novice class licensees into the Technician class and all Advanced class licensees into the Amateur Extra class. In a somewhat related petition, Jeffrey H. Siegel, WB2YRL, of Burke, Virginia, had requested that the FCC grant Advanced class license holders Morse code operating privileges equivalent to those enjoyed by Amateur Extra class licensees.

In 1999, the FCC streamlined the Amateur Radio licensing system into three classes - Technician, General, and Amateur Extra. While it no longer issues new Novice or Advanced class licenses, existing licenses can be renewed, and Novice and Advanced licensees retained their operating privileges.

"The Commission concluded that the three-class structure would streamline the licensing process, while still providing an incentive for licensees to advance their communication and technical skills," the FCC said in its dismissal letter to Whedbee and Siegel. It specifically rejected suggestions that Novice and Advanced class licensees be automatically upgraded to a higher class, concluding that it would be inappropriate for these licensees to "receive additional privileges without passing the required examination elements." The FCC cited the same reason in 2005, when it denied requests to automatically upgrade Technician licensees to General class and Advanced licensees to Amateur Extra class, as part of a wide-ranging proceeding.

Antenna Protection Bill Reintroduced in Congress

H.R. 555 - a new "Amateur Radio Parity Act" bill - has been introduced in the U.S. House of Representatives. The bill's language is identical to that of the 2015 measure, H.R. 1301, which passed in the House late last summer but failed to gain necessary support in the last days of the US Senate session. The bill is designed to ensure that amateurs do not face unreasonable antenna restrictions by homeowner associations and similar groups. As with the previous bill, the new measure was introduced by Rep. Adam Kinzinger (R-IL). Rep. Greg Walden, W7EQI (R-OR), was among the co-sponsors. Walden now chairs the House Committee on Energy and Commerce, to which the new bill has been referred. H.R. 555 will get an initial airing in the Subcommittee on Communications and Technology. When H.R. 1301 came up in committee, Walden spoke forcefully in favor of the measure, which ultimately attracted 126 House cosponsors.

Do Be Do Be DO

Gentle Reminder: Dues DUE

It's time for renewal of your EGARA membership!

This year dues remain the same at just \$15 for an individual or \$25 for a family membership. Your membership will continue to support EGARA's many efforts to advance amateur radio and its service to the community.

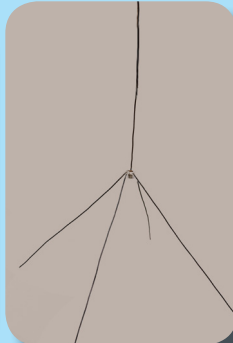
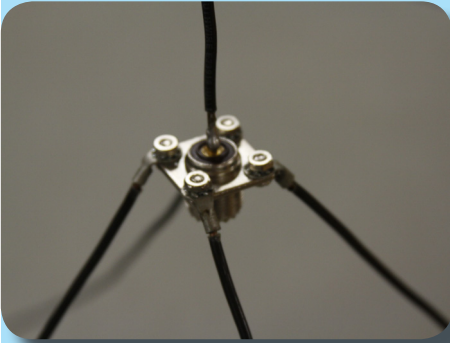
Dues can be paid at club meetings or by sending a check to:

Bryan Jackson, EGARA Treasurer
983 Sterling Ridge Drive, Rensselaer, NY 12144.

Please make your check payable to: EGARA

Need an Antenna? - Build Your Own

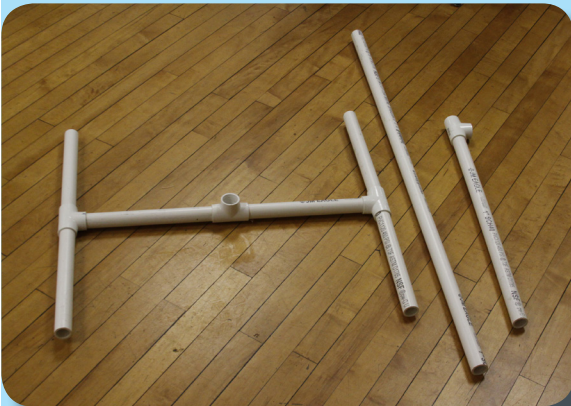
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The photo on the far left shows the vertical element and the four radials attached to the SO-239 female connector. Use ring connectors to connect the radials.

In the right-hand photo is the finished antenna. All of the elements are fashioned out of 14 ga solid copper wire. After mounting, each radial should be bent downward at a 45 degree angle.

To connect the antenna to your radio you will need a piece of coax with a male PL-259 on one end, and a connector that fits your radio on the other, most likely an SMA connector of the correct type (male or female). These can either be purchased ready-made or you can build it yourself. RG-59 A/U coax works well, as it's flexible enough to run down the PVC pipe and out to your radio. You will need a UG-175 reducing adaptor to fit the PL-259 to the coax if you are building the feedline yourself. The length is not critical -- in our case the feedline was 10 feet. But wait! We're not done yet, so don't start measuring and cutting coax until we complete the next piece of the project -- our antenna mounting system.



The easy-to-build mounting system will depend on whether you want a portable antenna or one that can be used as a permanent setup. Either way, you'll be using readily available PVC pipe, which has the benefit of being non-conductive, easily found, and easy to work with.

For a portable system, use 1 inch PVC pipe and cut it into sections to form an "H" base that will hold the vertical pole on which the antenna will sit. Glue the bottom pieces together using PVC "T" connectors to make the base, as shown. Although dimensions aren't critical, make the legs long enough so that they provide a sturdy support for the vertical piece.

For the vertical section, again use a "T" connector that the sections will fit into -- but don't glue these! This will allow you to take the assembly apart for easy transportation.



Now, attach your coax to the SO-239 connector at the base of the antenna and feed the cable down the top of the PVC pipe. The connector will sit nicely in the top of the pipe and the feedline can be brought out of the open side of the "T" in the vertical support pole to your radio.

If you want to use your new antenna in a permanent installation, you can mount it in the top of a piece of PVC pipe and secure the SO-239 connector with silicone after running your feed line down the pipe. The PVC can then be attached to a permanent support structure, such as a chimney or sturdy pole.

With your new antenna in operation, you should find a noticeable improvement in both your radio's transmit and receive range when compared to your old "rubber ducky" setup. Best of all, you'll now be enjoying close to your radio's full power, too!

ARRL Asks FCC to Allocate New 5 MHz Band, Retain Channels and Current Power Limit

ARRL has asked the FCC to allocate a new, secondary contiguous band at 5 MHz to the Amateur Service, while also retaining four of the current five 60-meter channels and current operating rules, including the 100 W PEP effective radiated power (ERP) limit. The federal government is the primary user of the 5 MHz spectrum.

The proposed action would implement a portion of the Final Acts of World Radiocommunication Conference 2015 (WRC-15) that provided for a secondary international allocation of 5,351.5 to 5,366.5 kHz to the Amateur Service; that band includes 5,358.5 KHz, one of the existing 5 MHz channels in the US.

“Such implementation will allow radio amateurs engaged in emergency and disaster relief communications, and especially those between the United States and the Caribbean basin, to more reliably, more flexibly and more capably conduct those communications [and preparedness exercises], before the next hurricane season in the summer of 2017,” ARRL said in a January 12 Petition for Rule Making.

The FCC has not yet acted to implement other portions of the WRC-15 Final Acts.

The Petition for Rule Making can be found on the web in PDF format at, <http://www.arrl.org/attachments/view/News/87580>.

The League said that 14 years of Amateur Radio experience using the five discrete 5-MHz channels have shown that hams can get along well with primary users at 5 MHz, while complying with the regulations established for their use. “Neither ARRL, nor, apparently, NTIA is aware of a single reported instance of interference to a federal user by a radio amateur operating at 5 MHz to date,” ARRL said in its petition. NTIA - the National Telecommunications and Information administration, which regulates federal spectrum - initially proposed the five channels for Amateur Radio use. In recent years, Amateur Radio has cooperated with federal users such as FEMA in conducting communication interoperability exercises.

“While the Amateur Radio community is grateful to the



Commission and to NTIA for the accommodation over the past 14 years of some access to the 5-MHz band, the five channels are, simply stated, completely inadequate to accommodate the emergency preparedness needs of the Amateur Service in this HF frequency range,” ARRL said, adding that the five 2.8-kHz wide channels “have not provided sufficient capacity to enable competent emergency preparedness and disaster relief capability.”

Access even to the tiny 15-kHz wide band adopted at WRC-15 would “radically improve the current, very limited capacity of the Amateur Service in the United States to address emergencies and disaster relief,” ARRL said. “This is most notably true in the Caribbean Basin, but the same effect will be realized elsewhere as well, at all times of the day and night, and at all times of the sunspot cycle.”

In its Petition, ARRL also called upon the FCC to retain the same service rules now governing the five channels for the new band. The WRC-15 Final Acts stipulated a power limit of 15 W effective isotropic radiated power (EIRP), which the League said “completely defeats the entire premise for the allocation in the first place.”

“For precisely the same reasons that the Commission consented to a power increase on the five channels as recently as 2011 [from 50 W PEP ERP to 100 W PEP ERP], the Commission should permit a power level of 100 W PEP ERP, assuming use of a 0 dBd gain antenna, in the contiguous 60-meter band,” ARRL said. “To impose the power limit adopted at WRC-15 for the contiguous band would render the band unsuitable for emergency and public service communications.”

ARRL pointed out that the ITU Radio Regulations permit assignments that are at variance with the International Table of Allocations, provided a non-interference condition is attached, limiting the use of such an assignment relative to stations operating in accordance with the Table.

The League asked that General class or higher licensees be permitted to use the band. The FCC will not invite comments on the League’s Petition until it puts it on public notice and assigns a Rule Making (RM) number.

Keep EGARA Accredited - Join ARRL
EGARA gets many benefits from being ARRL accredited -- but we need at least 51% of our members to join ARRL Consider joining today if you're not.

CALENDAR

February 8, 2017 - EGARA Monthly Meeting - 7 pm at the East Greenbush Masonic Temple; Program: History of FCC Licensing

March 11, 2017 - Ham Swapfest - Saratoga Co. Amateur Assn, Coop-Ex Bldg (aka Solar Bldg), 50 West High Street (Rt 67w) in Ballston Spa - 8 am free admission. **Info: Jim at kg2h@arrl.net**

March 19, 2017 - VE Exam Session - 11:15 am - Capital Area Radio Enthusiasts (Walk-ins allowed) - Location: American Red Cross, 33 Everett Rd, Albany NY - **Info: 518 482-5584**

May 13, 2017 - EGARA Hamfest 2017 - East Greenbush Fire Department.

Pro Tip: Guarding Against ESD

We've all had it happen.

We walk across a carpet and reach for a light switch or door knob and ZAP! Static electricity can discharge thousands of volts and besides giving us a painful shock, it can also quickly fry our electronic devices.



Using tools designed to prevent *electrostatic discharge* (ESD-safe) will keep your electronics from getting zapped during repair. These include ESD-safe tools, such as anti-static wrist straps, small screw extracting pliers and tweezers. But other such tools can be difficult to come by. If you can't get the right ESD-safe tool, make sure to work on an anti-static surface.

Using non-metal ESD-safe tools not only prevents unwanted static discharges but also will keep your devices scratch-free, inside and out.



Wearing an anti-static strap keeps sensitive components safe from damage by ESD

Using a flathead screwdriver to peel up a connector can damage both the connector and the board. Using a metal wedge -- or "spudger" -- to crack open a case or cell phone can lead to unsightly scratches, too. ESD-safe spudgers, which are designed to pry, get the job done without creating nicks and disappointment.



Wanted to Buy

- **Inexpensive Rotor for 6 meter beam** - Contact Peter Mattice by email at: kd2jkv@gmail.com.

For Sale

- **Heathkit Antenna Tuner Model - SA-2060A** -- \$ 300; Contact Tom Scorsone by e-mail at: kc2fcp@nycap.rr.com.
- **Ameritron Model AL-811H** - Linear amplifier uses (4) 811's - with manual - great condition - \$700 obo;
- **Kenwood Ts-480 Hf Rig** - 200 w PEP output, w/manual, cable, and microphone - like new - \$800 obo; Contact: Steve WB2HPR at 326-0902.

Looking to Buy, Sell or Swap?

Send your info to W2RBJ@outlook.com

Join the Nightly Ragchew

EGARA members are invited to join the club's ragchew every weeknight at 6 pm on 3840 khz, 3605 khz 3610 khz or 50.125mhz (depending on band conditions and traffic).

It's a great way to catch up on club news!

The East Greenbush Amateur Radio Association

Organized in 1998, by Bert Bruins, N2FPJ, SK and Chris Linck, N2NEH, the East Greenbush Amateur Radio Association, an ARRL affiliate, is committed to providing emergency services, educational programs, and operating resources to the amateur radio operators and residents of the Capital Region of New York State. The club station is W2EGB. The club also has several VHF and UHF repeaters open to club members and the public.